

13. Courses of Study and Scheme of Assessment ME INDUSTRIAL ENGINEERING

(2015 REGULATIONS)
(Minimum No. of credits to be earned: 72)

Course Code	Course Title	Hours/Week			Credits	Maximum Marks			CAT
		Lecture	Tutorial	Practical		CA	FE	Total	
I SEMESTER									
15MN01	Statistics, Quality Control and Reliability Engineering	2	2	-	3	50	50	100	FC
15MN02	Manufacturing Engineering and Industrial Management	3	-	-	3	50	50	100	FC
15MN03	Engineering Economic Analysis	3	-	-	3	50	50	100	PC
15MN04	Simulation Modeling and Analysis	3	-	-	3	50	50	100	PC
15MN05	Operations Management	3	-	-	3	50	50	100	PC
15MN51	Industrial Engineering Laboratory	-	-	4	2	100	-	100	PC
15MN61	Industry Visit & Technical Seminar	-	-	4	2	100	-	100	EEC
Total 24 hrs		14	2	8	19	450	250	700	
II SEMESTER									
15MN06	Advanced Optimization Techniques	3	2	-	4	50	50	100	PC
15MN07	Quality Engineering and Ergonomics	3	-	-	3	50	50	100	PC
15MN08	Supply Chain Management	3	-	-	3	50	50	100	PC
15MN09	Modeling and Analysis of Advanced Manufacturing Systems	3	-	-	3	50	50	100	PC
15MN10	Project Management	3	-	-	3	50	50	100	PC
15MN__	Elective – 1	3	-	-	3	50	50	100	PE
15MN52	Operations Research Laboratory	0	-	2	1	100	-	100	PC
Total 22 hrs		18	2	2	20	400	300	700	
III SEMESTER									
15MN__	Elective – 2	3	-	-	3	50	50	100	PE
15MN__	Elective – 3	3	-	-	3	50	50	100	PE
15MN__	Elective – 4	3	-	-	3	50	50	100	PE
15MN__	Elective – 5	3	-	-	3	50	50	100	PE
15MN__	Elective – 6	3	-	-	3	50	50	100	PE
15MN53	Manufacturing Systems Design Laboratory	0	-	2	1	100	-	100	PC
15MN71	Project Work I	0	-	6	3	100	-	100	EEC
Total 23 hrs		15	-	8	19	450	250	700	
IV SEMESTER									
15MN72	Project Work II	-	-	28	14	50	50	100	EEC
ELECTIVE THEORY COURSES(Six to be opted)									
15MN21	Total Productive Maintenance	3	-	-	3	50	50	100	PE
15MN22	Enterprise Resource Planning	3	-	-	3	50	50	100	PE
15MN23	Safety and Environment Management System	3	-	-	3	50	50	100	PE
15MN24	Flexible Manufacturing Systems	3	-	-	3	50	50	100	PE
15MN25	Industrial Scheduling	3	-	-	3	50	50	100	PE
15MN26	Lean Six Sigma in Manufacturing and Service	3	-	-	3	50	50	100	PE
15MN27	Integrated Product Design and Development Strategies	3	-	-	3	50	50	100	PE
15MN28	Product Analysis and Cost Optimization	3	-	-	3	50	50	100	PE
15MN29	Design for Manufacture and Assembly	3	2	-	4	50	50	100	PE
15MN30	Evolutionary Computation	3	-	-	3	50	50	100	PE
15MN31	Value Engineering	3	-	-	3	50	50	100	PE
15MN32	Human Resource Management	3	-	-	3	50	50	100	PE
15MN33	Systems Engineering	3	-	-	3	50	50	100	PE
15MN34	Object Computing and Data Structures	3	2	-	4	50	50	100	PE
15MN35	Service and Operations Management	3	-	-	3	50	50	100	PE
15MN36	Lean thinking and Manufacturing	3	-	-	3	50	50	100	PE
15MN37	Stochastic Dynamic Programming	3	-	-	3	50	50	100	PE
15MN38	Marketing Management	3	-	-	3	50	50	100	PE
15MN39	Financial and Cost Accounting	3	-	-	3	50	50	100	PE
15MN40	Industrial Engineering and Management Games	3	-	-	3	50	50	100	PE

* Indicated is the minimum number of credits to be earned by a student.

**CAT – Category; FC – Foundation Course; PC – Professional Core; PE – Professional Elective
EEC – Employability Enhancement Course**

ONE CREDIT COURSES

15MK01	Process Engineering and Costing
15MK02	Strategic and Human Resources Management
15MK03	Measurement of Vibration and Sound
15MK04	Challenges in Implementing Lean Manufacturing
15MK05	Computational Fluid Flow and Heat Transfer Analysis of Mechanical Systems
15MK06	Thermal Analysis of Mechanical Systems using Finite Element Method
15MK07	Creative and Innovative Methods for Design and Development
15MK08	Concepts of Product Design
15MK09	Cooling of Electronic Equipment
15MK10	Value Analysis and Value Engineering
15MK11	Characterization of Turbo Machinery Using CFD
15MK12	Characterization of Heat Exchangers Using CFD

SCIENCE ELECTIVES

15ID01	Micro Electro Mechanical Systems (MEMS)
15ID02	Sensors for Engineering Applications
15ID03	Laser Processing of Materials
15ID04	Plasma Technology
15ID05	Nanosensor and its Applications
15ID06	Nano Magnetism and Spintronics
15ID07	Corrosion Science and Engineering
15ID08	Instrumental Methods of Chemical Analysis
15ID09	Polymer Science and Technology
15ID10	Nanomaterials and Nanotechnology
15ID11	Thin Film Technology

HUMANITIES AND LANGUAGES ONE CREDIT COURSES

15OK01	Research Writing in Engineering Sciences
15OK02	Indian Ethos and Human Values
15OK03	Personality Development
15OK04	Financial Accounting and Cost Accounting